

REMARKS/ARGUMENTS

The Examiner's attention to the present application is noted with appreciation.

Various amendments have been made to the claims to address the Examiner's objection to claim 1 and rejections of the claims under 35 USC § 112. Applicant wishes to thank the Examiner for the opportunity to clarify the claimed subject matter.

The Examiner rejects claim 1 as being anticipated by Partlo et al. (U.S. Patent No. 6,452,199). Such rejection is respectfully traversed. Partlo et al. do not disclose an integral electrical excitation generator and heat exchanger, which is important to the present invention because it cools the gas down quickly enough to prevent pooling reactions in the gas. In addition, Partlo et al. require "extremely high temperatures, in some cases much higher than the temperature at the surface of the sun" (col. 5, lines 21-2). This is completely different from the relatively low temperature requirement of approximately 200 degrees Celsius of the present invention. Thus there is no motivation to apply Partlo et al. to the present invention.

Further, because of the foregoing, it would not be obvious over Partlo et al., either alone or in combination with Shang et al. (U.S. Patent No. 5, 892,328), to integrate the generator and heat exchanger. In addition, as stated above, Partlo et al. require extremely high temperatures, while Shang et al. require the use of a microwave cavity, which will not work with the present invention. Thus there is no motivation to combine the two references, and no motivation to apply either reference to the present invention. Therefore, applicant respectfully traverses the Examiner's rejection of claims 2-7 under 35 U.S.C. 103(a).

The Examiner's rejections of claims 8 and 9 under U.S.C. 103(a) are respectfully traversed. In addition to the arguments presented above, neither Partlo et al., nor Shang et al., nor the cited art teach the simultaneous application of a high intensity pulsed field to induce ionization and a lower intensity electric field to optimize the production of the desired excited state(s) of a target molecule (for example, $O_2^1\Delta$). Simply applying the pulsed field will not yield enough of the excited molecule to permit further

example dissociation and/or laser excitation, to occur in the present invention. Thus claims 8 and 9 are allowable over Partlo et al. in view of either Shang et al. or the cited art.

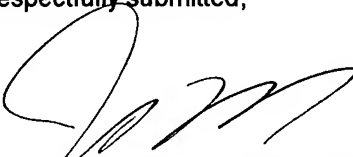
In view of the above amendments and remarks, it is respectfully submitted that all grounds of rejection and objection have been avoided and/or traversed. It is believed that the case is now in condition for allowance and same is respectfully requested.

If any issues remain, or if the Examiner believes that prosecution of this application might be expedited by discussion of the issues, the Examiner is cordially invited to telephone the undersigned attorney for Applicant at the telephone number listed below.

Also being filed herewith is a Petition for Extension of Time to September 9, 2003, with the appropriate fee. Authorization is given to charge payment of any additional fees required, or credit any overpayment, to Deposit Acct. 13-4213. A duplicate of the Petition paper is enclosed for accounting purposes.

Respectfully submitted,

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